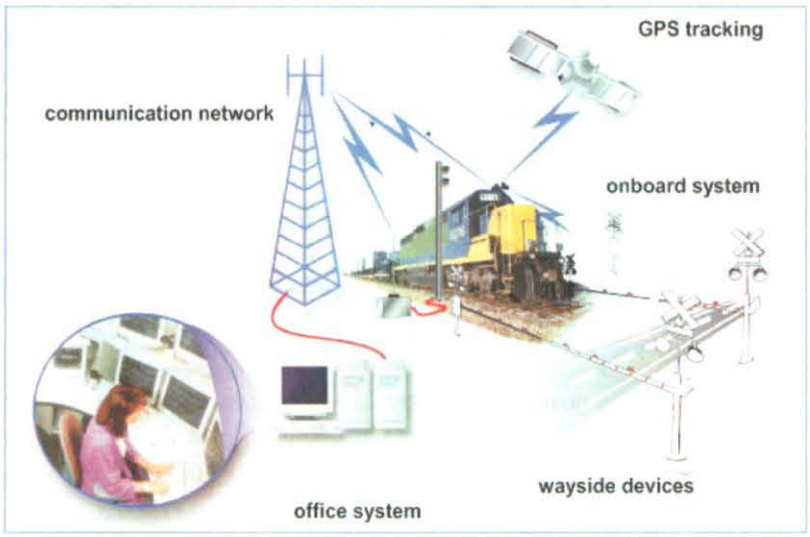
DCTA FREQUENCY SPECTRUM FOR POSITIVE TRAIN CONTROL - OVERVIEW

The Rail Safety Improvement Act (RSIA), signed by the President on October 16, 2008 as Public Law 110-432, enacted a federal mandate requiring installation of Positive Train Control (PTC) technology on Class 1 freight and passenger rail systems, including commuter rail systems, by December 31, 2015. Since the industry-proposed PTC solutions rely on wireless communication links to provide safety-critical information to a rail vehicle, adequate radio spectrum is required to implement PTC for all railroads across the U.S. Such communication links must have an unimpaired and instantly accessible radio channel. Radio spectrum in the U.S. is a scarce resource, availability and demand of which were not addressed by the U.S. Congress' RSIA-2008; therefore, each railroad must independently obtain sufficient spectrum for its PTC system requirements. Congressional action is needed to enable DCTA and other commuter rail systems to effectively and efficiently develop and implement a PTC system as intended by Rail Safety Improvement Act.



The efforts to obtain frequency spectrum for PTC use is daunting in both its technical requirements as well as financial impacts. What help can you provide? To assist DCTA in mitigating the extreme technical challenges and acquisition costs for frequency spectrum necessary to implement its PTC system, and continue to provide vital public transportation services, we would respectfully ask that you support DCTA in the following actions:

- **The FCC should give serious consideration to the use of the public safety band for public safety purposes including PTC.**
- **The FCC should consider dedicating the E Block for the exclusive use of commuter railroads, such as DCTA, in the areas where the E Block in not currently licensed.**
- **Congress should consider providing support for the small commuter railroads by relieving them of the burden of negotiating costly lease agreements with 220 MHz spectrum owners.**

PTC systems require the use of interoperable radio communications among the vehicles, wayside systems and the back office dispatch servers. To ensure interoperability, the spectrum in the 220 MHz band was chosen by the railroad industry (led by Freight Class I Railroads) as the common platform to deploy PTC radio networks throughout the country. The radio spectrum that has been selected for PTC is finite and therefore a highly expensive commodity.

Jim Cline, President ·DCTA · 1660 South Stemmons, Suite 250 · Lewisville, TX · 972-221-4600 · www.dcta.net

Currently, DCTA has three practical options to acquire the spectrum necessary for PTC implementation and each has practical and financial implications that could impact the development and implementation of the PTC system. The current practical solutions for DCTA are:

1. **Lease Currently Owned Class I Spectrum**:

   PTC-220, LLC is an entity formed by the Class I railroads (CSX, UP, NS, and BNSF) to own and manage spectrum to be used for the implementation of PTC. The rail industry is uncertain if that spectrum is sufficient to accommodate both freight and passenger operations in congested areas, similar to DCTA's region, and the expected costs to acquire the necessary frequencies is volatile. In addition, small commuter railroads, such as DCTA, believe that the risk is very high and not the intent of RSIA-2008 to be dependent on big, for-profit railroads to supply a critical operations component of their systems.

2. **Spectrum Acquisition from a Third Party**:

   There are a number of options for spectrum acquisition from the non-railroad industry entities in the Dallas region (See Figure 1). As can be seen, the various possible blocks are fragmented and have the additional constraint of being subject to different FCC regulations. The fragmented nature of the 220 MHz spectrum with different FCC regulations governing different 220 MHz spectrum blocks will require major FCC technical waivers to optimize the spectrum for PTC use. Some experts, such as American Public Transportation Association (APTA), have indicated that the acquisition of adequate radio spectrum for PTC, especially in dense, metropolitan areas, could pose significant challenges and delays to the commuter rail industry. The process of obtaining spectrum from third parties presents legal challenges to small commuter railroads, such as DCTA, in that the rights of the owner may come into question. As an example, South California Regional Rail Authority (SCRRA) has obtained 220 MHz PTC spectrum through a third party, but the ownership of the spectrum, and therefore the ability of the putative owner to lease the property, is presently in dispute, resulting in the inability of SCRRA to use the spectrum. DCTA cannot withstand such a risk.

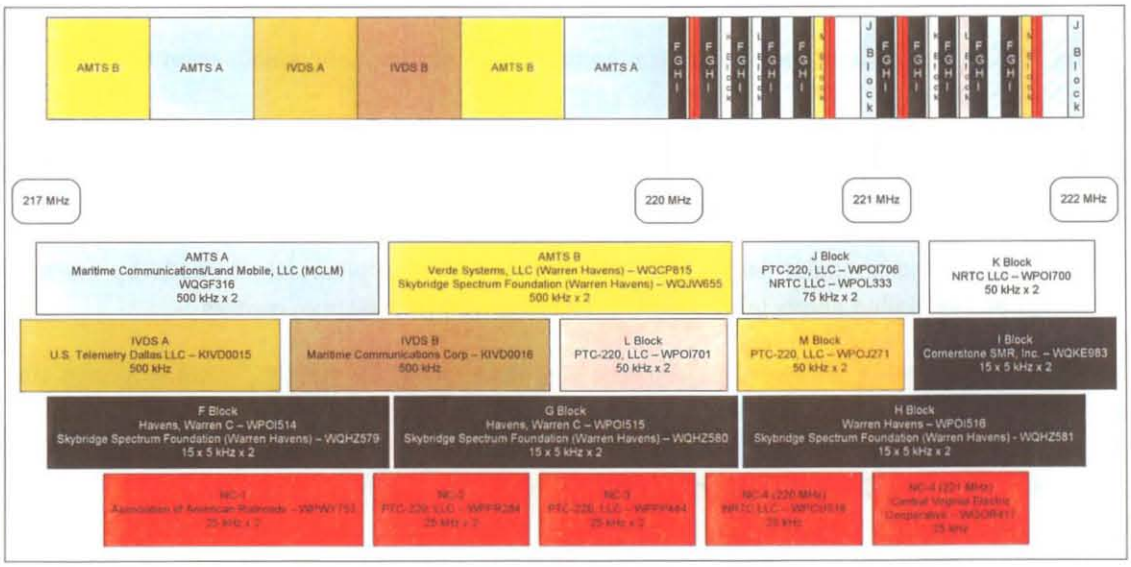


Figure 1: Dallas Area PTC Spectrum Ownership

3. **Obtain Spectrum that is Currently in FCC Possession**:

The FCC currently holds a number of channels in DCTA's region that may suffice to implement PTC in the DCTA area of operation, see Figure 2. The E Block and the Public Safety designated block may be suitable for PTC implementation. To date, the FCC has not offered the use of any of these spectra as a solution for rail industry PTC spectrum needs.

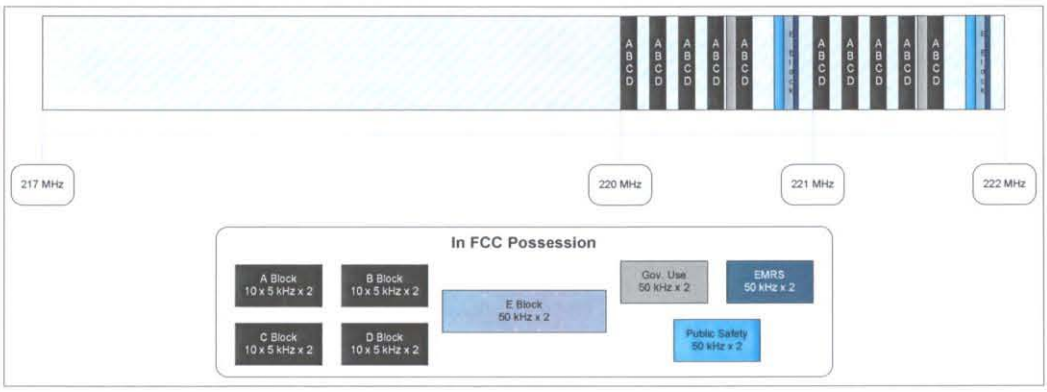


Figure 2: Dallas Area PTC Spectrum in FCC Possession

Assistance Needed:

The efforts to obtain frequency spectrum for PTC use is daunting in both its technical requirements as well as financial impacts. What help can you provide? To assist DCTA in mitigating the extreme technical challenges and acquisition costs for frequency spectrum necessary to implement its PTC system, and continue to provide vital public transportation services, we would respectfully ask that you support DCTA in the following actions:

- The FCC should give serious consideration to the use of the public safety band for public safety purposes including PTC.
- The FCC should consider dedicating the E Block for the exclusive use of commuter railroads, such as DCTA, in the areas where the E Block in not currently licensed.
- Congress should consider providing support for the small commuter railroads by relieving them of the burden of negotiating costly lease agreements with 220 MHz spectrum owners.